

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

REC'D 03 APR 2006

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(PCT Article 36 and Rule 70)

Applicant's or agent's file reference WH-12221-1WO	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. <b>PCT/CA2004/002016</b>	International filing date ( <i>day/month/year</i> ) 24 November 2004 (24-11-2004)	Priority date ( <i>day/month/year</i> ) 24 November 2003 (24-11-2003)	
International Patent Classification (IPC) or national classification and IPC IPC: <b>B29C 47/08</b> (2006.01), <b>B29D 23/00</b> (2006.01)			
<b>Applicant</b> <b>LUPKE, MANFRED A. A. ET AL</b>			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <b>3</b> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <b>[X]</b> (<i>sent to the applicant and to the International Bureau</i>) a total of <b>7</b> sheets, as follows:</p> <p style="margin-left: 20px;">[X] sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 20px;">[ ] sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. 1 and the Supplemental Box.</p> <p>b. <b>[ ]</b> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <p> <input checked="" type="checkbox"/> Box No. I Basis of the report  <input type="checkbox"/> Box No. II Priority  <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  <input type="checkbox"/> Box No. IV Lack of unity of invention  <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement  <input type="checkbox"/> Box No. VI Certain documents cited  <input type="checkbox"/> Box No. VII Certain defects in the international application  <input type="checkbox"/> Box No. VIII Certain observations on the international application     </p>			
Date of submission of the demand <b>27 June 2005 (27-06-2005)</b>	Date of completion of this report <b>27 March 2006 (27-03-2006)</b>		
Name and mailing address of the IPEA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001(819)953-2476	Authorized officer  <b>Kristian MacKenzie (819) 934-4267</b>		

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/CA2004/002016

## Box No. I Basis of the report

1. With regard to the language, this report is based on:

the international application in the language in which it was filed  
 a translation of the international application into [ ] which is the language of a translation furnished for the purposes of:  
 international search (Rules 12.3(a) and 23.1(b))  
 publication of the international application (Rule 12.4(a))  
 international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished

the description:

<input checked="" type="checkbox"/> pages <u>1-14</u>	as originally filed/furnished
<input checked="" type="checkbox"/> pages* <u>15-19</u>	<u>27 June 2005 (27-06-2005)</u>
<input type="checkbox"/> pages*	received by this Authority on

received by this Authority on

the claims:

<input checked="" type="checkbox"/> pages <u>20-24</u>	as originally filed/furnished
<input type="checkbox"/> pages*	as amended (together with any statement) under Article 19
<input type="checkbox"/> pages*	received by this Authority on
<input type="checkbox"/> pages*	received by this Authority on

received by this Authority on

the drawings:

<input checked="" type="checkbox"/> pages <u>2/5-5/5</u>	as originally filed/furnished
<input checked="" type="checkbox"/> pages* <u>1/5</u>	<u>27 June 2005 (27-06-2005)</u>
<input type="checkbox"/> pages*	received by this Authority on

received by this Authority on

a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

- the description, pages
- the claims, Nos.
- the drawings, sheets/figs
- the sequence listing (*specify*):
- any table(s) related to sequence listing (*specify*):

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages
- the claims, Nos.
- the drawings, sheets/figs
- the sequence listing (*specify*):
- any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of those sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**International application No.  
PCT/CA2004/002016**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	<u>1-14</u>	YES
	Claims	<u>None</u>	NO
Inventive step (IS)	Claims	<u>1-14</u>	YES
	Claims	<u>None</u>	NO
Industrial applicability (IA)	Claims	<u>1-14</u>	YES
	Claims	<u>None</u>	NO

**2. Citations and explanations (Rule 70.7)**

D1: US 4,510,013 A (LUPKE, MANFRED A. A. et al.) 9 April 1985 (09-04-1985)

**Novelty (N)**

Claims 1-14 comply with PCT Article 33(2). D1 is considered to be the most relevant prior art with regards to the application. D1 discloses a cooling plug for use in a moving mold tunnel where the first moving block sections close with the second moving block sections. The cooling plug has a semi-embedded helical coil which has water running through it in order to further cool the pipe being extruded. The current application differs in that D1 does not disclose a cooling plug having two stages and a control arrangement nor does the cooling plug have a first stage which is separately controlled to be responsive to the changing conditions at the first stage.

**Inventive Step (IS)**

Claims 1-14 comply with PCT Article 33(3). The present invention does have an inventive step when the closest prior art is considered. The prior art (D1) does not teach, nor would it lead a person skilled in the art directly to making a cooling plug with two stages in a moving mold assembly where the first stage is responsive to the changing conditions at the first stage.

**Industrial Applicability (IA)**

The subject matter of claims 1-14 are considered industrially applicable and thus fulfills the requirements of PCT Article 33(4).